Name:

at1110paper_practice_test (v34)

1. Expand the following expression into standard form.

$$(5x + 6)(4x - 9)$$

$20x^2 - 45x + 24x - 54$

$20x^2 - 21x - 54$

2. Solve the equation.

$$(7x - 6)(4x + 9) = 0$$

$x = \frac{6}{7}$ $\quad$ $x = \frac{-9}{4}$

3. Expand the following expression into standard form.

$$(2x + 5)(2x - 5)$$

$4x^2 - 10x + 10x - 25$

$4x^2 - 25$

4. Expand the following expression into standard form.

$$(7x - 5)^2$$

$49x^2 - 35x - 35x + 25$

$49x^2 - 70x + 25$

5. Factor the expression.

$$x^2 + x - 20$$

$$(x+5)(x-4)$$

6. Factor the expression.

$$16x^2 - 9$$

$$(4x+3)(4x-3)$$

7. Solve the equation with factoring by grouping.

$$10x^2 - 8x + 15x - 12 \;=\; 0$$

$$(2x+3)(5x-4) = 0$$
$$x = \frac{-3}{2} \qquad x = \frac{4}{5}$$

8. Solve the equation.

$$5x^2 + 26x + 10 \;=\; 2x^2 + 3x - 4$$

$$3x^2 + 23x + 14 = 0$$
$$(3x+2)(x+7) = 0$$
$$x = \frac{-2}{3} \qquad x = -7$$